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deaths during the week ended on January 12 amounted in the city of Bombay to 1,228, being 209 more than during the previous week. The total number of cases of plague reported there for the last 4 weeks—that is to say, since December 15, 1900, being 158, 185, 231, and 386, respectively.

REUNION.—From January 10 until January 18, 6 new cases of plague occurred on the island, of which 5 ended fatally.

CAPE COLONY.—According to a communication dated February 8, 2 cases of plague were officially diagnosticated in Cape Town.

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GREAT BRITAIN.—During the last week of the month of January an unusually large number of cases of smallpox were noted. According to a communication dated January 30, there were then in the local hospital 380 patients suffering with smallpox. Since January 26 the disease is said to be on the decrease. According to the weekly bulletins arrived at the imperial health bureau, 34 persons died of smallpox in Glasgow between January 20 and February 2.

RUSSIA.—The epidemic of smallpox which caused numerous deaths in Warsaw during the last month of the year 1900, has abated now that the cold weather has begun. According to the official lists published by the municipal authorities there occurred 118 deaths between November 11 and December 8, 59 deaths between December 9 and January 5, and from January 6 to January 19, 31 deaths from smallpox in Warsaw alone. The extent to which the disease has raged in individual districts of Warsaw is said to be nothing unusual. For instance, during November and December of the previous year, there were 25 deaths from smallpox in the governmental district of Kalisch, of which 11 deaths occurred in the frontier districts. In the governmental district of Lomsha there were 9 deaths from smallpox in the month of December, against which there occurred in the governmental district of Warsaw (exclusive of the city of Warsaw) 122 deaths from smallpox in the month of November, of which 37 occurred in the commune of Nieszawa.

Respectfully,

JOSEPH B. GREENE,

Passed Assistant Surgeon, U. S. M. H. S.

The SURGEON-GENERAL,

U. S. Marine-Hospital Service.

Plague at Cape Town confirmed by bacteriologic examination.

[Clipping from Berliner Tageblatt, February 16, 1901. Translated and sent by P. A. Surg. J. B. Greene.]

BERLIN, GERMANY, *February 16, 1901.*

It is reported from Cape Town that the bacteriologist ordered by the Government to conduct the investigation of the cases of sickness there, has ascertained the presence of the bubonic plague bacillus and declared that it is undoubtedly an outbreak of the bubonic plague. Up till now, 12 cases have been diagnosticated with certainty in the hospital. Two patients, both Kaffirs, have died. There is only 1 white patient in hospital.

Probable discovery of the cause of acute articular rheumatism (rheumatic fever).

BERLIN, GERMANY, *February 21, 1901.*

SIR: I have the honor to submit a report of the recent discovery of an organism that is supposed to be the cause of acute articular rheumatism. The announcement of the discovery has aroused the greatest interest in the medical circles of Berlin, and the person to whom the

credit of the discovery is due is Dr. Fritz Meyer, of the University Clinic, Berlin.

The organism in question is a small diplococcus, arranged often in chains, and is found in the tonsil of patients suffering from angina complicating rheumatism. It was impossible to obtain it from the tonsil of patients suffering with simple tonsillitis. It is colored with the ordinary stains, but less distinctly, by Gramme's method, than the other pus organisms. The growth on the usual culture media is slight, for it requires a high degree of alkalinity, and a large percentage of peptone. Blood serum seems best suited for its growth. It is seen as a fine clear group, which under the microscope exhibits a medium yellow granular coloring with a dark center. Bouillon is diffusely clouded, and shows after some days a slightly flocculent precipitate. Milk is coagulated after about thirty hours. The culture under artificial media is very short lived, and soon loses the power of propagation.

Dr. Meyer has examined cultures from the affected pharynx of patients suffering from scarlet fever, septicæmia, influenza, tuberculosis, and muscular rheumatism, but the organism found failed to react in the same way when tried experimentally on animals.

The organism found on the tonsil of patients suffering from acute articular rheumatism when administered to rabbits reacted in the following way: When 8 c. c. of bouillon culture, eight days old, were injected hypodermically into rabbits, there resulted at the point of inoculation a hard infiltrated area, which soon became necrotic, but never led to abscess formation. This reaction differed markedly from that of the ordinary streptococci. After the course of six to ten days there appeared the first joint symptoms, which were filled with a sero-purulent exudate. In this exudate no organisms were found. In only two cases could the organism after two days be found in the pus cell at the point of inoculation.

The exudate in the joints lasted on the average eight days, and then disappeared spontaneously. The temperature rose on the day after inoculation to 40–41° C., soon dropping to 39° C. The rabbits seemed to stand intravenous injection better, as both the fever and joint involvement took place later than when hypodermically administered. Animals, however, treated by either method, as a rule, survived. The animals which came to necropsy presented anatomical lesions, which corresponded quite accurately with the lesions of polyarthritides in man. There was found eight times a clear serous pericarditis, three times peritonitis, and once pleuritis. In no case could the organism be found in the exudate. Seven of the animals—that is, about one-fifth of the rabbits with joint involvement, showed a marked valvular endocarditis, partly vegetative and partly ulcerative. From the deposit they succeeded in two cases in securing the organism administered in pure culture, which gave the joint symptoms when inoculated into other animals. In the five other cases the culture remained sterile. The examination of the blood of the affected animals revealed no organisms. It is worthy of note the fact that an endocarditis was produced with the organism by using a simple bouillon culture while with other pus organisms an injury to the valve is necessary, or the use of solid substance in the injecting material.

Further investigation will be necessary before it is proved that this diplococcus is the cause of acute rheumatism, but the work accomplished by Dr. Meyer is very suggestive.

Respectfully,

JOSEPH B. GREENE,

Passed Assistant Surgeon, U. S. M. H. S.

The SURGEON-GENERAL, *U. S. Marine-Hospital Service.*